

26. (New) The transgenic mouse of claim 24, wherein the decreased body weight is a decrease of about 15% in male transgenic mice, relative to male wild-type mice.

27. (New) A transgenic mouse comprising a heterozygous disruption in an endogenous mTMT, wherein said disruption in a homozygous state inhibits production of a functional mTMT protein resulting in a transgenic mouse exhibiting one or more of the following phenotypes: decreased body weight; decreased thymus weight; decreased thymus weight to body weight ratio; and increased pre-pulse inhibition, all relative to wild-type mice.

28. (New) A cell or tissue isolated from the transgenic mouse of claim 24 or claim 27.

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29. (New) A method of producing a transgenic mouse comprising a homozygous disruption in an endogenous mTMT gene, the method comprising:

- (a) providing a mouse embryonic stem cell comprising a disruption in an endogenous mTMT; and
- (b) introducing the mouse embryonic stem cell into a pseudopregnant mouse, wherein the pseudopregnant mouse gives birth to a chimeric mouse; and
- (c) breeding the chimeric mouse to produce the transgenic mouse,

wherein the transgenic mouse exhibits one or more of the following phenotypes: decreased body weight; decreased thymus weight; decreased thymus weight to body weight ratio; and increased pre-pulse inhibition, all relative to wild-type controls.

30. (New) A targeting construct comprising:

- (a) a first polynucleotide sequence homologous to a first region of an mTMT gene;
- (b) a second polynucleotide sequence homologous to a second region of the mTMT gene; and
- (c) a selectable marker located between the first polynucleotide sequence and the second polynucleotide sequence,

wherein the targeting construct when introduced into a murine embryonic stem cell, results in a

transgenic mouse having a disruption in the endogenous mTMT gene, wherein the mouse when homozygous for a disruption in the mTMT gene exhibits one or more of the following phenotypes: decreased body weight; decreased thymus weight; decreased thymus weight to body weight ratio; and increased pre-pulse inhibition as compared to wild-type mice.

31. (New) A method of producing a targeting construct for a mTMT gene, the method comprising:

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cont.
- (a) obtaining a first polynucleotide sequence homologous to a first region of a mTMT gene;
  - (b) obtaining a second polynucleotide sequence homologous to a second region of the mTMT gene;
  - (c) providing a vector comprising selectable marker; and
  - (d) inserting the first and second sequences into the vector such that the selectable marker is located between the first and the second sequences to produce the targeting construct,

wherein the targeting construct when introduced into a murine embryonic stem cell, results in a transgenic mouse having a disruption in the mTMT gene, wherein the mouse when homozygous for the disruption in the mTMT gene exhibits one or more of the following phenotypes: decreased body weight; decreased thymus weight; decreased thymus weight to body weight ratio; and increased pre-pulse inhibition, all relative to wild-type controls.

32. (New) A cell transformed with the targeting construct of claim 30.

33. (New) A method of identifying an agent that modulates a phenotype associated with a disruption in a mTMT gene, the method comprising:

- (a) administering an agent to a transgenic mouse comprising a homozygous disruption in the mTMT gene, wherein the transgenic mouse exhibits at least one of the following phenotypes: decreased body weight; decreased thymus weight; decreased thymus weight to body weight ratio; and increased pre-pulse inhibition, all relative to wild-type controls; and